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## **ABSTRACT**

The present invention relates to compositions and methods for decreasing the infectivity, morbidity, and rate of mortality associated with a variety of pathogenic organisms and viruses. The present invention also relates to methods and compositions for decontaminating areas colonized or otherwise infected by pathogenic organisms and viruses. Moreover, the present invention relates to methods and compositions for decreasing the infectivity of pathogenic organisms in foodstuffs. In particular, decreased pathogenic organism infectivity, morbidity, and mortality is accomplished by contacting the pathogenic organism with an oil-in-water nanoemulsion comprising an oil, an organic solvent, and a surfactant dispersed in an aqueous phase.